

Work Order ID 74777

74777

Page 1

October 6, 2011 11:34:53 AM

Item ID: D2500-1-190 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Ext'n -I' Beam Tube 4"
 Start Date: 10/06/11 Start Qty: 90.00 ***90*** Cust Item ID:
 Required Date: 10/17/11 Req'd Qty: 90.00 ***90*** Customer:
 Reference:

Approvals: Process Plan: M.C.J. Date: 11/10/06 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2500	Rev H								

100 PURCHASING 0.00
100
 Purchasing Memo 0.00
 Purchasing

Issue P/O: 15115
 a) Extrude as per Dwg D2500
 b) Material: 6061-T6 (QQ-A-200/8)
 c) Minimum yield tensile strength = 35 ksi
 d) Minimum ultimate tensile strength = 38 ksi
 e) Minimum elongation = 8%
 f) Order at 190" long
 g) Bon L Canada Inc. tool # 897105
 h) To be packed per DSK 066
 i) Pull test to ASTM standard B221 required.
 j) Material certification is required

11-10-7
 (90)

110 Receive & Inspect for Damage & Mat'l Certs 0.00
110
 Packaging Memo 0.00
 Packaging Ensure material certification is attached

11/14/28 (87)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 74777***74777***

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October 6, 2011 11:34:53 AM

Item ID: D2500-1-190

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Ext'n - I' Beam Tube 4"

Start Date: 10/06/11 Start Qty: 90.00

90

Cust Item ID:

Required Date: 10/17/11 Req'd Qty: 90.00

90

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							
120									
QC	Memo	0.00							
Quality Control	Check Pull test per Dwg D2500 for compliance page attached. Check hardness with Webster tester								
130	Identify as per dwg & Stock Location: <u>Hall</u>	0.00							
130									
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

87 10-11-01
11/11/11

mo/aw

11/11/14
11-11-11

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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NOTE: Date & initial all entries

Picklist Print

October 6, 2011 11:34:58 AM

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Work Order ID: 74777

74777

Parent Item: D2500-1-190

D2500-1-190

Parent Item Name: Ext'n - 'I' Beam Tube 4"

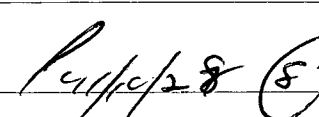
Start Date: 10/06/11

Required Date: 10/17/11

Start Qty: 90.00

Required Qty: 90.00

Comments: IPP: G 02.09.05 Added DSK 066 KJ/RF
IPP: H 07.07.06 rev G dwg EC IPP Rev:1 as per
dwg revH DD 10.02.23 verified byEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-190P *D2500-1-190P* Ext'n - 'I' Beam Tube 4"		Purchased	No			110	Each	0.0000	1	90			
										**			

Dart Aerospace Ltd

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NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING

D2500-1-XXX EXTRUSION & D2500-3-XXX EXTRUSION

NOTES:

1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-200/8 OR AMS-QQ-A-200/8 OR ASTM B221

MINIMUM TENSILE YIELD STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY WITH DART B/N USING FINE POINT PERMANENT INK MARKER

7) WEIGHT: D2500-1 = 0.143 lb/in, D2500-3 = 0.066 lb/in

8) FOR D2500-1 PART NUMBER IS D2500-1-XXX WHERE XXX IS CUT LENGTH (EX. D2500-1-190 IS 190" LONG). D2500-1 EXTRUSION MANUFACTURED FROM:

- A) BON L DIE # 897105 -> PREFERRED
- B) CARADON MIDEAST DIE # PAH-28030
- C) CARADON MTL DIE # MH-18868

9) FOR D2500-3, PART NUMBER IS D2500-3-XXX WHERE XXX IS CUT LENGTH IN INCHES (EX. D2500-3-100 IS 100" LONG). D2500-3 EXTRUSION MANUFACTURED FROM:

- A) CARADON INDALEX DIE # MS-18867

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 74777 M.C.J.

11/10/06

RELEASED
2010-02-02
WP

H	REDRAW & REFORMAT DWG; CORRECT BON L DIE # TYPO (ZN B8-1), ADD AMS & ASTM MAT'L OPTION (ZN D8-1), TOLERANCES NOW PER CARADON DWG (SHT 2)	CP	09.07.16
G	ADD DIE NUMBERS & 'DIMS IN INCHES' NOTES	PH	07.04.17
F	CHANGE MAT. TO 6061-T6	DS	97.09.29
E	CHANGE MATERIAL TEMPER	DS	96.10.24
D	ADD MATERIAL PROPERTIES	DS	96.10.07
C	ADD D2500-3 WEB	BW	96.04.26
B	CHANGE INTERNAL WEB	DS	96.03.24
A	NEW ISSUE	DS	96.03.19
REV.	DESCRIPTION	BY	DATE
DESIGN	4	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2500 SHEET 1 OF 2 TITLE EXTRUSION SCALE NTS COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DRAWN	9		
CHECKED	PH		
MFG. APPR.	MS		
APPROVED	MS		
DE APPR.	MS		
DATE	09.07.16		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

74777

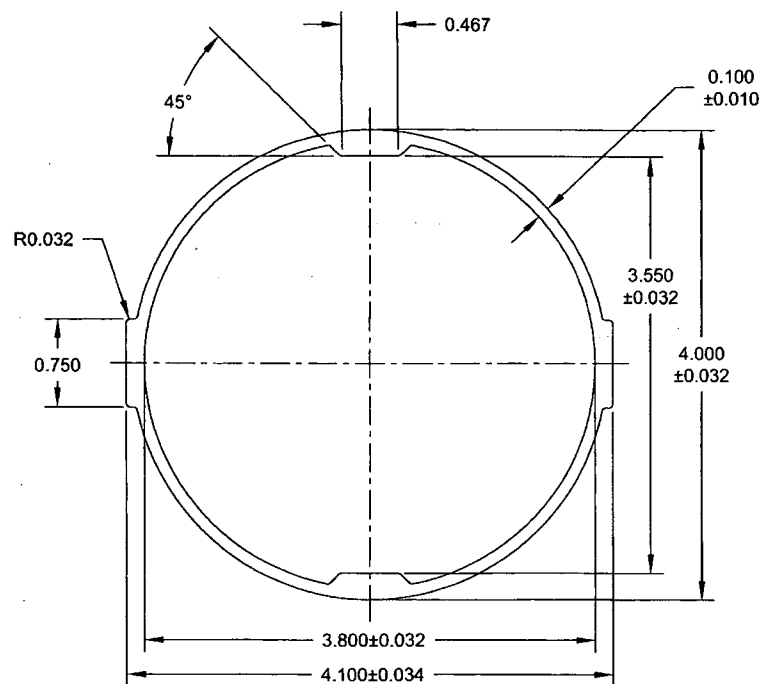
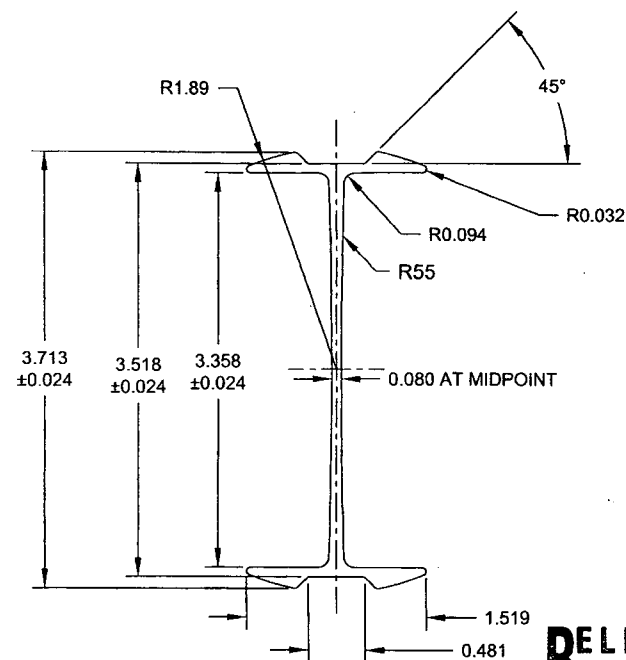
8 7 6 5 4 3 2 1

D

C

B

A

**D2500-1****D2500-3**

RELEASED
 2010-02-02
MA

DESIGN	<i>4</i>	DART AEROSPACE LTD	
DRAWN	<i>JP</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>BA</i>	DRAWING NO. D2500	REV. H
MFG. APPR.	<i>MA</i>	SHEET 2 OF 2	
APPROVED	<i>MA</i>	TITLE	SCALE
DE APPR.	<i>MA</i>	EXTRUSION	NTS
DATE	09.07.16	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

8 7 6 5 4 3 2 1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID: PO15115

Purchase Order Date 10/7/2011

PO Print Date 10/7/2011

Page Number 1 of 1

Order From : VC-BON001

SIGNATURE ALUMINUM
1850 CLEMENTS ROAD
PICKERING, ON L1W 3R8
CA

Contact Name		Buyer	Brigitte Golden
Vendor Phone	800 563 1079	Requisition Nbr	
Vendor Fax	800 565 8339	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2500-1-190P	Ext'n -1' Beam Tube 4"	10/24/2011 Yes	90.00 Each	Yours ppd	\$83.7730	\$7,539.57

Special Inst: As per DWG: D2500 Rev: H
B74777
Mat: 6061-T6(QQ-A-20/8)
Min. yield tensile strength=35kdi
Min ultimate tensile strength=38ksi
min elongation=8%
Order at 190"long
Bon L. Canada Inc. tool # 897105
To be packed per DSK 066
Pull test to ASTM standard B221 required

PO Total: \$7,539.57

Change Nbr: 1

Change Date: 10/7/2011

No substitution or deviation without
consent.
Certificate of Conformity Material
Certification required when applicable

ACCT# 46024

INVOICING AND COMPANY LOCATION

SIGNATURE ALUMINUM CANADA
1850 CLEMENTS ROAD
PICKERING ON L1W 3R8

SHIPPING MANIFEST

MANIFEST DATE / DATE DU BODEREAU
10-26-11

MANIFEST NUMBER / N° DE BODEREAU
003195

SALES ORDER NUMBER / N° DE COM
103123

SHIP TO / EXPÉDIÉ À

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
CANADA

PHONE: 613-632-5200

SOLD TO / VENDUE À

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
CANADA

PHONE: 613-632-5200

TERMS / FREIGHT

PP

REFER TO
THESE NUMBERS ON
ALL CORRESPONDANCE

REFEREZ-VOUS A CES
NUMEROUS POUR TOUTE
CORRESPONDANCE

LOCATION

PIC

TRAILER NUMBER /
REMORQUE Nombre

5302

SALESMAN /
VENDEUR

042

CREDIT REP / REP DU CRÉDIT

SALES REP / REP. DES
VENTES

G.ATTENBOROU

CUSTOMER ID / ID DU
CLIENT

46024

ORDER DATE / DE LA
COM

10/07/11

CUSTOMER PO NUMBER / CLIENT PO Nombre

15115

BILL OF LADING NUMBER / NO. DE CONNAISSEMENT

003195

JOB / FICHIER

CARRIER / TRANSPORTEUR
JODEE

FIELD SALES REP / REP
REGIONAL DES VENTES

G.ATTENBOROU

CUST SERVICE REP / REP.
SERVICE CLIENTELE

DLB

ITEM NO. / NUMÉRO	ORIGINAL ORDER QUANTITY / Quantité d'ordre ORIGINAL	UNIT / UNITÉ	PREVIOUS SHIPPED QUANTITY / PRÉCÉDENT Quantité livrée	MFG. PART NUMBER / MFG. PARTIE NUMÉRO	ALLOY & TEMPER / ALLIAGE & TEMPER	FINISH DESCRIPTION / DESCRIPTION DE FINITION	NBR OF PKGS / NBR DE PKGS	GROSS LBS / LIVRES BRUT	NET QUANTITY / QUANTITÉ NETTE	UNIT / UNITÉ	QUANTITY DUE / Quantité en raison
001	2,413	LB		DAA-897105-2	6061 T6		4	2,326	2,220	LB	
	1,094	KG		D2500-1-190	190.0000 IN			1,055	1,007	KG	
	90	PC			Cut(+): 0.1180 Cut(-): 0.0000	Min: 0 % Max: 0 %			87	PC	
						807133 / 121327	1	615	589		23 PC
						807133 / 121328	1	615	589		23 PC
						807133 / 121329	1	668	642		25 PC
						807133 / 121330	1	428	401		16 PC

87

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping manifests and signed and dated below by customers authorized representatives.
No return materials will be accepted for credit without permission. The articles and/or services covered by this shipping manifest were produced in accordance with the fair labor standards act of 1938 as amended. Order accepted subject to the terms and conditions stated on the reverse side.

Page 1

4	2,326	2,220	LB
	1,055	1,007	KG
		87	PC
TOTALS			

CUSTOMER ACKNOWLEDGEMENT OF GOODS DELIVERED AND CONDITION

DATE OF DELIVERY

DRIVER

SIGNATURE ALUMINUM CANADA

1850 CLEMENTS RD
PICKERING, ON L1W 3R8

Cert Date	Cert No.	Sales Order	Page
10/26/2011	5272040	103123	1
Cust PO	B/L No	Lot	Date
15115	003195	807133	10/26/11

Sold To	Ship To
46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA	46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA

Item No	Part No	Item Description	Cust Part
001	DAA-897105-2	190" Mill 6061 T6	D2500-1-190
Gross Weight	2,326 LBS		
Net Qty	2,220 LBS	87 PCS	4 PKGS
Specification	Die Desc		
AMS QQA 2009 + ASTM B221-08			

Mechanical Tests:

Tensile	Yield	% Elongation	Conductivity	HREW
MPA / KSI	MPA / KSI			
347.6 / 50.4	309.0 / 44.8	16.4	0.0	93

Chemical Analysis:

SI	FE	CU	MN	MG	CR	ZN	TI	V
0.66	0.28	0.28	0.07	0.91	0.06	0.20	0.02	0.00

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Mazzotta, Director of Quality Signature Aluminum Canada Inc